Uncovering the Truth about Fake News: A Research Model Grounded in Multi-Disciplinary Literature

Jordana George, Natalie Gerhart & Russell Torres

View supplementary material

Published online: 02 Jan 2022.

Submit your article to this journal

View related articles

View Crossmark data

Routledge
Taylor & Francis Group

Uncovering the Truth about Fake News: A Research Model Grounded in Multi-Disciplinary Literature

Jordana George[a], Natalie Gerhart[b], and Russell Torres[c]

[a]Texas A&M University, Department of Information & Operations Management, 320 Wehner 4217 TAMU, College Station, TX 77843; [b]Creighton University, Department of Business Intelligence and Analytics, 2500 California Plaza, Omaha, NE 68178; [c]University of North Texas, Department of Information Technology & Decision Sciences, 1155 Union Circle #305249, Denton, Texas

ABSTRACT

Many diverse fields across academia are interested in the fake news (FN) phenomenon. A multidisciplinary literature review can provide researchers with new insights, alternative methods, and theories from other fields. The present review incorporates FN research across fields and organizes it into three categories: FN Stimuli, the triggers and impetus for people and organizations to engage with FN; FN Actions, which encompass the activities and processes undertaken in FN; and FN Outcomes, the effects and consequences of FN Actions. Within these categories, we systematize research topics into major themes. Stimuli: motivation; Actions: fabrication, propagation, mitigation; and Outcomes: persuasion, conviction, polarization, and aversion. We identify relationships that are important in understanding the impact on society: the cycle of amplification, the cycle of fragmentation, and the progression from social polarization and aversion into motivation for more fake news. Last, we distinguish FN roles, including creators, consumers, influencers, endorsers, propagators, and resistors.

Introduction

Thanks to the novel coronavirus, the earth is healing itself and animals are returning to overrun habitats; or are they? According to National Geographic [31], fake news (FN) surrounding the impacts of COVID-19 on climate change is rampant on social networks, and this is only one of a myriad of contemporary topics where FN abounds. Many scholars define FN as false information intentionally created and distributed to mislead [5, 71, 142]. FN is an important contemporary concern, primarily due to the technological affordances of social networks, which allow individuals to act not only as news consumers, but also as news creators (through first-hand accounts) and news propagators (by sharing or interacting with news) [69, 111, 141]. Because FN often masquerades as legitimate news, and with no effective means for the traditional media to play the role of gatekeeper and lend credibility to news stories, FN and legitimate news stories intermingle and can be easily mistaken for one another [44]. As a result, "news" no longer implies the impartiality of trained journalists, and its consumption may result in users incorporating falsehoods into their belief structures. Despite mitigation efforts and the emergence of a number of online

fact checking services, over half of 6127 respondents of a recent US survey admitted sharing FN online. Only 10% realized it at the time, but that also begs the question of why known FN would be shared at all [136].

History is riddled with examples of falsehoods used to achieve a goal. For instance, the term "disinformation," commonly used in discussions of FN today, is credited to Stalin ('Dezinformatsiya') who set up an official department for FN to influence the public and mislead opponents [105, 145]. Due in part to this history, the evolution of language, the development of new modes of communication, and the variety of social and academic perspectives on the topic, there is significant disagreement on exactly what constitutes FN. To some, all news is fake if it originates from a vilified source, such as liberals maligning Fox News or conservatives eschewing *The New York Times* [9, 29]. Others consider news to be fake if it opposes their personal worldviews or values [17, 71]. Alternative definitions have been voiced which broaden the notion to include news satire and parody, misinformation (inadvertent untruths), manipulated images such as deep fakes, advertisements masquerading as news, and propaganda [142]. We define fake news as information perceived as news which is *both factually incorrect and explicitly created to deceive* [5, 78, 141]. This definition requires the creator's deliberate intent to mislead and excludes inadvertent false information (e.g., misinformation) as well as alternative forms of false information with goals other than deception (e.g., satire and parody).

In this paper we answer the call to promote interdisciplinary research on FN [23, 78] with a multidisciplinary review of the FN literature. In doing so, we provide an organizing framework for existing FN research which can serve as a foundation for future FN scholars across fields. The goal of our review is not only to provide the current state of FN literature, but to curate a practical body of literature [55, 77, 147], identify where research in particular areas has and has not been conducted, and lay a foundation for scholars to distinguish new contributions from prior work [139]. This review was devised to answer the following research questions: (1) What is the current state of FN research? (2) What are the major streams? (3) What can we learn from viewing FN across multiple disciplines? (4) How can we guide future FN research?

Through our synthesis we contribute to the current understanding of FN in several ways. First, we provide a framework of categories and themes found in FN research across disciplines, which provides a consistent language for future investigations of FN. Second, we propose relationships within these themes that amplify FN and promote the fragmentation of society. Third, we describe a typology of FN roles related to these themes. We then provide a research agenda that highlights opportunities both in IS and across disciplines. Last, we contribute to literature review methodology with a detailed process for multidisciplinary research, identifying high quality research, and using grounded theory for a standalone literature review.

Methodology

Standalone literature reviews are a tradition in many academic fields and provide important support for research [129, 146]. To our knowledge, however, there are comparatively few FN standalone literature reviews and relatively few multidisciplinary literature reviews in general. Kapantai et al. (2020) examined the FN literature to establish a taxonomy of FN types, characterized by the underlying motive, facticity, and verifiability [66]. This useful

and focused work draws on a smaller corpus of relevant papers. Zhou and Zafarani (2020) conducted a multidisciplinary review focused on FN detection techniques [166] and employed literature from psychology, philosophy, and economics. Our review extends these conversations by synthesizing research from numerous disciplines and discussing FN topics not previously covered. Furthermore, we utilize a combination of searches to ensure inclusion. First, we scoured top journals in each field. Next, we searched for specific articles across multiple journals and disciplines. Last, we searched the major IS journals and conferences. An overview of the process is described below and a detailed description of the method may be found in the Appendix.

Our search was multi-pronged looking for both plausible journals and conferences to include as well as article searches. We employed the SCImago Journal Rank (SJR), the Web of Science Journal Citation Rank (JCR), searches within top journals, searches within the Association of Information Systems (AIS) Basket of Eight, and Google Scholar. Backward/ forward searches were also conducted to identify additional literature which may have otherwise been missed.

While the topic of FN is of significant interest across a wide variety of fields, it was necessary to constrain the fields included in this review to both manage the size of the resultant corpus and to maintain a degree of consistency. We included Information Science, Information Systems & Technology (which includes computer science), Communications (journalism and communications), and Social Sciences (social science, sociology, political science, psychology, economics, and business). The included disciplines and related journals are summarized in the Appendix in Table A1. The keywords included "fake news," "falsified news," "false news," and "disinformation." The term "disinformation" was chosen over "misinformation" to capture the deceptive intent present in our definition of FN. Misinformation is a term used most often for poorly communicated or inadvertently incorrect information, rather than deceptive information [65, 158]. The Appendix presents additional details on the method used to select and analyze papers including the search process, number of papers identified and excluded during each step, and the final list of selected papers (Table A3).

We used grounded theory method (GTM) for this interpretive theoretical review [112]. The GTM approach to literature reviews is useful to ensure theoretical relevance and comprehensiveness and for building theory, although it is a relatively uncommon method for literature reviews [25, 139, 163]. GTM is helpful for research across disparate disciplines [163], which is our primary motivation for employing this method. Given the complexity of FN, we contend that the structure and process identified for GTM reviews is well-suited to meet established criteria for both rigor (in systematicity) and relevance (in interpretation) [146]. We felt that the key elements of Glaserian GTM (avoidance of preconceived notions, theoretical sampling, constant comparison, and theory building) provided a solid strategy, along with approaching FN with theoretical sensitivity [151]. In addition to GTM, we also drew upon standalone literature review papers to inform our selection and analysis methods [79, 146, 161]. The analysis process included open coding, memoing, selective coding, and theoretical coding with several iterations as theoretical saturation was in each area was reached, and further papers served for theoretical sampling. This resulted in fifty-three open codes, fourteen selective codes, and eight theoretical codes. The final codes include motivation, fabrication, propagation, mitigation, persuasion, conviction, aversion, and polarization. The iterations continued throughout paper development, resulting in one more

abstraction: three main categories of FN Stimuli, FN Actions, and FN Outcomes. The Appendix contains a visual depiction of the coding process, presented in Figure A2, inspired by Seidel et al. 2013 [131] and the theoretical codes are presented in Table A3 in the form of a concept map [161].

Review of the Fake News Literature

Our analysis of fake news research indicates that interest in the topic has grown dramatically in recent years across a number of disciplines (see Figure A3 in the Appendix). In looking at the corpus of literature as a whole, we identified three primary topic categories: FN Stimuli, FN Actions, and FN Outcomes. FN Stimuli are the triggers and impetus for people and organizations to engage with FN. FN Actions are the activities and processes undertaken in dealing with FN. FN Outcomes describe the effects and consequences of FN. Within these three categories FN can be further broken down into eight major themes: Stimuli: motivation; Actions: fabrication, propagation, mitigation; and Outcomes: persuasion, conviction, polarization, and aversion. Each is discussed in detail below.

Fake News Stimuli

Motivation to Create
Motivation encapsulates the underlying reasons individuals and organizations engage in FN fabrication. Motivation as presented here does not address individual motivations to consume or share FN but, rather, why FN is created in the first place. Of the 228 papers examined, motivation is present in 57 (see Table A4 in the Appendix). The literature on motivation suggests that action is preceded by attitude toward a given behavior and perceptions about engaging in it [4]. Motivation research employs theories related to choice (e.g. rational choice theory [160], theories of program choice [116]), but this stream is somewhat inconsistent in its theoretical grounding. The motivation research focuses heavily on the economic and power-related incentives which make the creation of FN appealing. Such research highlights monetary inducements inherent in social media and digital advertising [6, 26] as well as political or ideological power-related incentives [9, 123]. Structural elements of both the online advertising industry [26] and the traditional broadcast and print media industry [85] lead to the creation of FN, as well. Revenue generation opportunities from advertising, combined with low barriers to entry and low operating costs make FN a lucrative opportunity [6, 105]. Politically, governments and partisans use FN for political framing [16, 30]. We also found that FN is most potent in the early days of an event when information asymmetry abounds [16, 19].

Some argue that the internet enables *fictitious information blends* (FIBs), which "gain plausibility from a nucleus of truth around which orbit speculations driven by partisan polarization, the resistance of citizens to information that contradicts them, and the reluctance of self-interested elites to reject them outright" [124:28]. While FIBs may have agenda setting power, others argue that FN is intertwined with partisan media but does not set the media agenda [154]. What is clear from these studies is that the co-mingling of truth and fiction at the heart of most FN is among the most problematic and least understood characteristics of the phenomenon.

Fake News Actions

Fabrication

Fabrication includes the various actors, methods, and tactics used to create FN. Just over half of the papers analyzed in the review addressed fabrication (see Table A4 in the Appendix). Fabrication is treated in a variety of ways in FN research; however, most address the design and manufacture of FN or focus on strategic messaging. Examples of the former include investigations of the operations of state-run FN factories [83] or the practices of FN websites [121]. The examination of strategic messaging is evident in research which finds that FN is created with truth-subversive language [2] designed to play on emotion [30] and connect with recipients by signaling authenticity and homophilic characteristics on the part of the originator [164]. The objective of such strategies is to seed FN content effectively, and to increase the propagation of FN messages through social networks. Strategies employed by Russia's Internet Research Agency demonstrate FN as a highly structured process designed to play on human tendencies. Using industrialized processes and specialized roles [83], the Internet Research Agency employs agents of influence [148] whose online messages contain cues to signal authenticity and cultural competence in order to develop credibility [164]. Additional creation research examines the use of cloaked websites that mimic opponent websites to incite aggressive reactions [41] and the potential of fake images [74]. Due to the practical focus of assessing why fabrication exists in specific situations, there is no dominant underlying theory that significantly guides the fabrication theme.

Propagation

Propagation is the distribution of FN. Despite popular fascination with the "spread" of FN, only 100 of the 228 papers reviewed placed significant focus on the propagation of FN. Propagation research often focuses on technological contributions to the propagation of FN, both in terms of platform capabilities that enable the spread of FN [24] and as a means for the direct distribution of FN such as bots [162, 165]. As a result, much of this theme relies on features of platforms and is therefore not explicitly driven by any theory. Social networks enable easy propagation of FN through sharing that requires little thought or effort [6]. FN is enabled by minimal barriers to market entry and the technological capabilities of publishing "news" are easily accessible [12, 99]. Dissemination occurs fluidly across multiple social network platforms [85] and is influenced by the presence of high virality metrics such as like and share counts [72], as well as factors related to group norms [47]. Other investigators focus on the role of media and social network platform regulation in sharing behaviors [21] and the use of strategies designed to attract additional views of FN [84]. Legitimate news may pounce on social network story leads and reduce time for intensive vetting and verification in the rush to be first with a headline [137]. Still others examine the characteristics of FN sharers and the underlying causes of sharing [43, 83], or reasons why an individual might choose to avoid sharing FN [8].

Mitigation

Mitigation includes attempts to reduce the amount, spread, or impact of FN. Mitigation is a highly studied topic, and the research is primarily focused on disrupting amplification of FN, either through human or machine intervention. Human inventions include increasing

information literacy that enables FN recipients to evaluate authenticity more accurately [39, 88]. Personal detection of FN is important as research suggests that identification of FN alters subsequent behaviors [33]. Other FN deterrence research focuses on *ex post* methods, such as flagging [95, 97], rating news sources [70, 71], social norms [51] or fact checking [61, 89]. The research shows inconsistent results, indicating that further study in this area is needed. Some authors find that flagging has a positive impact on user behavior [50, 69, 94], while others find that flagging provides no FN protection [126]. Still others show that indicators may reduce the believability of flagged content, but do not change user engagement [43, 95]. Fact checking is shown to have a positive effect on curbing FN-related behaviors [159]. Citizen curation, a process in which individuals in a social network fact check each other, can be effective [35, 114], although efficacy depends on the social tie strength between the two [89]. Another mitigation research stream finds that information bias is unavoidable and simple disclosure would allow readers to better evaluate FN [36], although other research indicates that individuals are ill equipped to evaluate the quality of online information or its source(s) [40, 125]. At the same time, there is a paradox in which those most engaged with social network news, and presumably the most literate, may be more likely to encounter and share FN [152, 157]. Overall, findings suggest that the intent to verify news is often based on a combination of message features and perceptions of the news provider [11, 150]. Recipients of FN use both internal and external authentication strategies [142], and the skills and experience of social network users is influential in FN detection [134], though virality metrics may serve as a *de facto* indicator of the wisdom of the crowd [72]. Based on these approaches, the elaboration likelihood model (ELM) is heavily employed in this theme (e.g., [11, 63, 94–97, 138]). The ELM asserts that the persuasiveness of information is evaluated through two psychological paths; a central path focused on evaluations of argument quality and requires high cognition, and a peripheral path relying on heuristics or cues with low cognition [64]. Researchers are trying to better understand the effect of FN on individuals' central and peripheral processing.

Research on the algorithmic detection of FN is dominated by IS. Such research details the development of machine learning (ML) models using the design science paradigm [46, 75]. Classification and text mining are demonstrated as potentially useful for identifying and segregating FN from other news content [49]. Much of the research on automatic detection seeks to outperform prior attempts in terms of accuracy. However, given that model performance metrics are fundamentally tied to the unique data set from which they are derived, such claims of superior accuracy are dubious. Inputs to these algorithms include both the semantic content of the message, which can expose deceptive cues through text mining [49, 75], and external features collected through sources such as the Google API [107]. Some research suggests FN can be identified by associated meta-data, and other authors have considered the composition of the network and extracted information about both the news sender and receiver to inform predictive models [63]. Each approach adds to the body of knowledge on algorithmic detection of FN, and many authors have found encouraging results. However, detection remains a significant challenge and the variety of approaches in use suggests that no single paradigm governs this type of research, and it warrants continued exploration [162]. That notwithstanding, Twitter is the most popular data source used in IS FN detection research [162], and text mining is the most common method for detecting FN [46]. Other approaches have looked at how user characteristics such as culture [98] or education [155] influence detection or sharing behavior. Still others,

building on the theory of planned behavior, explore intent to verify news encountered on social networks [150]. Less commonly, authors have explored the effect of national governance approaches as mitigating factors for FN [56, 128].

Fake News Outcomes

Persuasion

The persuasion theme captures the epistemological judgements made by an individual and is related to the influence of FN on the beliefs of a recipient. Persuasion is the most represented theme in the literature with 166 of the 228 papers included in this review, and it is the most uniformly studied across fields. FN is a tool used to influence public opinion, support preferred candidates, damage opponents, or promote or harm a particular cause or organization [1, 118]. FN is particularly effective when combined with government censorship to manipulate public sentiment and promote government legitimacy [52] and governments and partisans use FN for political framing in order to gain public support [16, 30]. This effect is reduced over time as new information becomes available to fill in the blanks and offer different narratives [16]. Those who use FN for persuasion have learned to strike early when public interest is high. This diverse research stream investigates how belief is established and takes a variety of forms, including recipients' political knowledge [92, 116] and affiliation [127] and how that influences susceptibility to FN. Tensions around news in general arise when people are exposed to news that is difficult to understand, when they are overwhelmed by too many choices, and when news conflicts with their worldviews [17, 81]. Confirmation bias, people's tendency to positively judge information that matches their personal worldviews [140], is a common thread.

Confirmation bias is also related to the psychological utility that consumers receive from news that validates their personal ideology, such as pleasure or satisfaction [6]. Add to this the enjoyment afforded by entertaining soft news treatments of traditionally hard news topics, and news stories fashioned as entertainment become a source of psychological utility. It is important to understand the concepts behind soft and hard news as many FN stories employ soft news tactics. Hard news is straight-forward, facts-only, verifiable news while soft news generally takes a humanistic view, often highlighting tales of individual heroics and injustice or impacts on local communities [20]. Soft news effectively influences behavior with appealing stories [15]. When soft news expands to hard news, we see the "Oprah Effect" where people are swayed by celebrities, especially those who peddle soft news along with lifestyle entertainment [18]. The transformation of hard news into entertainment via soft news strategies is a strong factor in enabling FN. Nearly all news is now presented in a considerably "softer" format than in previous decades as news agencies analyze which formats earn the most clicks [18, 45].

A common theory employed in FN articles focused on persuasion is the Elaboration Likelihood Model [95, 138], which asserts that information persuasiveness is evaluated through two paths; a central path evaluating argument quality that requires higher cognition, and a peripheral path relying on heuristics or cues with low cognitive effort The research suggests that motivating the central path should be beneficial for individual FN detection. Similarly, the theory of motivated reasoning is commonly employed in this theme [14, 92, 159], as FN consumers use confirmation bias to determine what news items with which to engage. Other persuasion research investigates the role of binary thinking in the

establishment of belief [106], factors influencing the likelihood of validation [142, 149], or the role of technical skills in the ability to identify deceptive content [134]. Social identity differences can also play a role in as those with greater relational identities may lean more towards reinforcing FN, while those with higher social identifies may lean towards more variety [110].

Conviction

Conviction represents the incorporation of a given FN narrative into an individual's mental model as a deeply held belief and is thus the result of the persuasive effect of FN. Conviction is characterized by both longevity and strong commitment. As the information conveyed by FN is amplified within social networks, it transitions from the "news" realm to the realm of public knowledge [130] and becomes axiomatic for those that incorporate it into their belief system. The conviction theme is present in 107 of the papers included in this review and incorporates a broad range of theories. The 'convicted' individual "participates in their own victimization" through a "lack of acceptance for opposing viewpoints" [27:12]. Existing biases in the convicted individual cause resistance to disconfirming evidence [82] such as flags indicating a particular news item is false [95]. Such individuals may venture into the long tail of the web [100] in search of sources that provide information congruent with existing beliefs [14], as their faith in traditional news outlets drops. Media bias and media hostility are relatively new social phenomena. Historically, people in democracies tended to believe what they saw, read, or heard in the mainstream news [122]. Today, news from democracies is under just as much suspicion as state-run media [9, 52]. Hostility against the media is focused on the premise that the media is biased, sets agendas, and produces news that is either slanted or outright fake to support their view [17, 81]. Research also suggests that some individuals are more susceptible to incorporating false information into their beliefs. Differential educational backgrounds and personality traits [76], as well as political knowledge and trust [92] have been identified as influential factors. In addition, older individuals may be more likely to become convicted due to cognitive changes associated with aging [54]. Unlike persuasion which we characterize as the epistemic evaluation of a single FN item, conviction occurs over time as FN themes are amplified in the social network and the focal FN recipient is repeatedly exposed to the false narrative [115]. As conviction grows within the network, the broader societal impacts of polarization and aversion arise.

Polarization

We characterize polarization as a social phenomenon in which a sharp division in beliefs occurs, creating factions with countervailing conceptualizations of truth. The resultant us-versus-them mindset further entrenches beliefs, and individuals increasingly identify as a member of a distinct belief group. This division is best captured in social identity theory, which is heavily used in this them [62, 120, 153, 165]. Polarization is addressed in 103 of the 228 papers included in this review and is largely focused on political ideology, although some extend beyond the political sphere [62]. Market forces in the media and social networks exert considerable influence on FN, as much or more than personal characteristics [9, 101]. FN is highly related to partisan media, both responding to and setting their agendas [154], and purveyors of FN

often represent themselves as openly ideological and in ways designed to appeal to partisan audiences [121]. Increased news market competition leads to specialty consumer focus in programming, resulting in both growth in the number of partisan media outlets and increasing extremity of views [9]. Changes in the recent political environment have resulted in new subversive campaign tactics that employ FN as a tool for polarization and division [123]. Political candidates today use more negative campaign strategies than in years past which increases polarization [62]. Against this backdrop, individuals seek membership in groups with congruent ideological beliefs, resulting in network partisan homophily and the self-selection of media silos which provide confirmatory news [80]. The resultant echo chambers reinforce polarization through further exposure to polarizing messages [81, 120]. Over time, polarized groups of individuals not only avoid opposing viewpoints, but actively attack them as described by the aversion theme.

Aversion

A step beyond polarization is aversion, the complete repudiation of opposing views and those that hold them. The aversion theme is evident in 73 of the 228 papers included in our analysis. Highly convicted individuals in polarized groups may transition from simple avoidance of information which runs counter to their beliefs to actively attacking those that supply such information. This phenomenon of distrust and suspicion of news agencies is known as "oppositional media hostility" [9:175]. Media brand bias is an example of this in action [17]. More striking is the evidence that partisans not only dislike those who share opposing information, but discriminate against them, and the level of that discrimination can exceed that of race or other common types of social discrimination [62]. Thus, while polarization is the formation of ideological groups and a largely passive undertaking, aversion is an active process in which opposing views are resisted or even antagonized. For this reason, similar to polarization, social identity theory is common in this theme [120, 153] when looking at who is "us" and who is "them" so it is clear who to be averse towards.

To summarize, this review breaks the extant FN literature down into causes of FN, how people and organizations interact with FN, and how FN impacts people, organizations, and society. We describe these as stimuli, actions, and outcomes. Within these categories we found eight major literature themes: motivation, fabrication, propagation, mitigation, persuasion, conviction, polarization, and aversion. This framework is illustrated in Figure 1 as a Descriptive Model of FN Research. Organizing the literature in this fashion provides researchers with both a macro view of the FN literature and a detailed examination of FN topics through research themes.

Discussion

The diverse fake news literature, when looked at as a whole, provides several insights for researchers. First, we develop a research framework and then propose an agenda to propel future IS research.
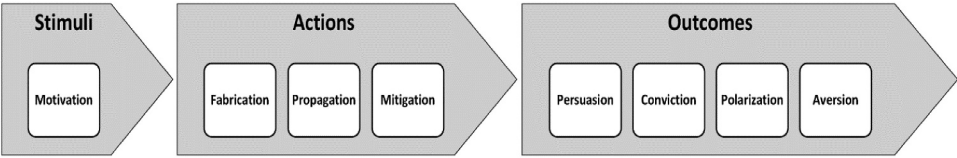
Figure 1. Descriptive Model of FN Research

A Framework for Fake News Research

Figure 2 illustrates our framework to help drive future fake news research. In it, we identify relationships between themes, and we discern specific roles that actors perform. We suggest several distinct relationships that promote FN acceleration, perpetuation, and increased societal impact. We refer to these as the cycle of amplification, the cycle of fragmentation, and the progression from aversion to motivation. These inter-theme relationships are important for researchers as they provide insights into the antecedents and consequences of their particular FN phenomenon of interest. Below we discuss these relationships and then elaborate on FN roles.

Along with FN categories and themes, we suggest that actors take on specific roles in FN processes. To our knowledge, there is no existing typology of FN roles in the extant literature, and FN research may not always explicitly identify the role(s) under investigation. Because FN is commonly transmitted via social networks and is, therefore, conveyance of (false) information in a computer-mediated environment, we began our interpretation of FN roles guided by existing IS theory which characterizes interlocutors as either senders or receivers [28, 34]. This view is consistent with the conceptualization of FN as a message transmitted from a creator to a consumer. However, we determined that more granularity would be helpful to fully depict human involvement in FN. Thus, based on the FN research and consistent with prior research demonstrating the centrality of roles in discussions of social media interactions [21], we derive FN roles based on their portrayal in the extant research: producers, who are the creators of FN, and consumers, who are the propagators,
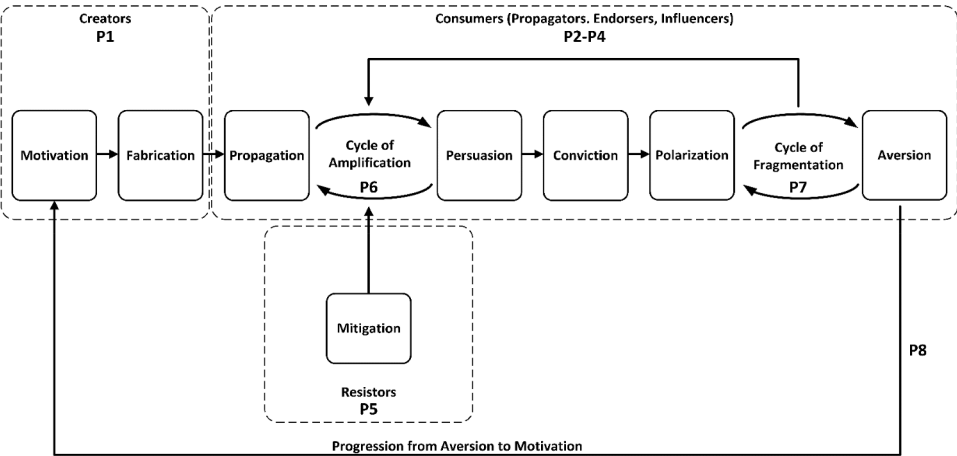

Figure 2. Framework for Fake News Research

endorsers, influencers, and resistors. These roles are summarized in Table 1 along with their associated themes. We also note that roles are not discrete, and people may take on more than one role.

FN creators are the actors responsible for FN formation and are portrayed in a variety of ways in FN investigations. While a creator is simply an individual involved in the manufacture of FN, the literature more commonly characterizes creators as members of ideological groups or state actors [66, 81, 83]. Research related to creators generally involves investigations about the impetus for, or manufacture of, FN. Thus, research featuring creators is heavily associated with the motivation and fabrication themes. For example, such research examines topics such as underlying financial or political motives [9, 26] and strategies and tactics employed in the creation of FN [40, 162]. Fundamentally, a creator is necessary for FN to exist and, therefore, may be viewed as the initiator of all subsequent actions. Hence, we suggest the following:

P1: Creators initiate and perpetuate FN

FN consumers include those who read, watch, or otherwise encounter FN, intentionally or inadvertently, whether or not they take action in regard to the FN. The literature suggests that the FN consumer is a meta-role composed of several more specific roles, primarily distinguished by epistemic judgments or assessments about the utility of the FN message made by the recipient. Our review suggests that research on consumers is more prevalent than that related to creators, likely due to the breadth of theoretical issues of interest related to the consumption and distribution of FN. Such research often presents FN consumers as critical to the overall FN process and as a key target of interest, because if no one consumed FN, it would quickly cease to exist. The persuasion theme plays an important part in research on FN consumers. Belief is often driven by deeply held ideological views and epistemic judgments are largely subject to confirmation bias [80, 138]. Thus, FN consumers decide if a given message conforms to their epistemological beliefs, and then ultimately adopt a supporting or refuting role. We identify four types of FN consumers: propagators, endorsers, influencers, and resistors.

FN propagators share FN items and contribute to its viral spread [56, 154], exacerbating the problem. Propagators also contribute to persuasion because they implicitly endorse the FN item when they share, ultimately aiding the cycle of amplification. While propagators may engage in the most passive FN activities, such as liking and sharing on social media also called clicktivism or slacktivism [48], and lack the prestige of endorsers and influencers, they are nevertheless a major force in the spread of FN. Thus, we suggest the following:

P2: FN propagators spread fake news through implicit positive engagement

FN endorsers take the next step by choosing to comment or otherwise positively engage with FN [69, 89]. As opposed to propagators who implicitly affirm FN through sharing and liking, endorsers are explicit. While FN propagators help to propagate FN, endorsers actively promote FN propagation. Many social media algorithms give preference to posts that have more engagement, thus endorsers help spread FN through their affirmation. Like propagators, endorsers are considered in the propagation theme and lead to amplification. FN endorsers demonstrate conviction with their actions, leading to the outcomes of polarization, aversion, and therefore the cycle of fragmentation. The outcomes of this role

also lead to polarization, aversion, and the cycle of fragmentation. Therefore, we suggest the following:

P3: FN endorsers spread fake news through explicit positive engagement

FN influencers include famous, powerful, or otherwise authoritative FN supporters with a large social media following. While such individuals may participate in FN as propagators or endorsers, their status affords them extended social reach and the ability to greatly influence the outcome of FN campaigns [21]. Donald Trump is an example of a highly discussed influencer, mentioned by name in approximately one-quarter of the articles examined in this review. Influencers are often studied because of their ability to accelerate FN propagation and persuasion. FN influencers, endorsers, and propagators all contribute to the cycle of amplification, and their support of FN campaigns ultimately contributes to outcomes such as conviction, polarization, and aversion.

P4: FN influencers amplify fake news through explicit positive engagement

Propagation and persuasion form a cycle, which we term the cycle of amplification. The basis for this reciprocal relationship is the indication that message consistency and message volume (how many times a message is received) influences beliefs [115]. An individual who repeatedly encounters similar FN topics circulated within their network is more likely to be persuaded by its content and, ultimately, retransmit the message, thus extending its social reach and exposing new recipients. The amplifying effect is intensified by the fact that virality metrics, such as numbers of shares, themselves are taken as evidence of the normative expectations of the network and thereby increase behavioral intentions to share [94]. Thus, as it travels throughout social networks, the FN message persuades new consumers who then also like and share it. In this way, FN messages become magnified in both quantity and power. While not all FN will be amplified, these themes often build on each other and are a key element of the success of FN campaigns. To summarize, the amplification cycle is about FN propagation and FN persuasion. Based on this, we suggest the following:

P5: Fake news propagation and persuasion share a symbiotic cyclical relationship that results in the amplification of fake news.

Aversion, although magnified by polarization, can itself exacerbate polarization through its oppositional messaging [120], thus creating a symbiotic relationship between polarization and aversion that we identify as the cycle of fragmentation. We define fragmentation as extreme polarization that not only splits society further apart but creates more opportunities for extremist views [9, 54]. In this cycle, messages are often labeled "fake news" based on ideological reactions to content rather than strict facticity, deepening divisions and increasing the desire to respond [119]. Further, in highly charged and ideologically polarized environments, common FN propagation agents such as bots have increased influence [102, 126]. Thus, individuals in such environments are more likely to encounter FN [57] and to use it as an ideological weapon against those they perceive as having differing truths [53, 56]. Notably, as the cycle of fragmentation develops, a market for ideologically supportive news develops, increasing demand for FN messaging and serving as a motivation for additional FN creation. Thus, we posit the following:

Table 1. Fake News Themes and Roles

FN Themes	FN Roles Definition	Producers — Make fake news	Consumers — Interact with fake news				Exemplar Theme Articles
		Creator — Those who create & develop FN	Propagator — Those who disseminate FN	Endorser — Those who support FN	Influencer — Eminents who engage in FN	Resistor — Those who fight against FN	
Motivation	Reasons and incentives for people to engage in FN creation	X					Allcott & Gentzkow (2017) [6]; Braun & Eklund (2019) [26]; Roemmele & Gibson (2020) [123]
Fabrication	Actors, methods, & tactics used in FN creation	X					Crabtree et al. (2019) [30]; Linvill & Warren (2020) [83]; Xia et al. (2019) [164]
Persuasion	Individuals judge the veracity of the news		X	X	X		Otto et al. (2017) [109]; Shen et al. (2019) [134]; Tandoc et al. (2018) [143]; Torres et al. (2018) [150]
Propagation	Distribution across channels by individuals, bots, or algorithms.		X	X	X		Bechmann (2020) [21]; Duffy et al. (2019) [38]; Hopp et al. (2020) [58]
Mitigation	Attempts to reduce the amount, spread, or impact of FN.					X	Kim et al. (2019) [71]; Kim & Dennis (2018) [69]; Margolin et al. (2018) [89]; Moravec et al. (2019) [95]
Conviction	Incorporation of a FN narrative as a deeply held belief.		X	X	X		Carlson (2018) [27]; Guess et al. (2019) [54]; Miller et al. (2016) [92]; Pennycook et al. (2018) [115]
Polarization	A sharp divide in beliefs based on FN consumption.		X	X	X		Iyengar & Westwood (2015) [62]; Lelkes et al. (2017) [80]; Robertson & Mourão (2020) [121]
Aversion	Rejection of opposing view due to FN consumption.		X	X	X		Arceneaux et al. (2012) [10]; Baum & Gussin (2008) [17]; Iyengar & Westwood (2015) [62]
Exemplar Role Articles		Arceneaux (2012) [9]; Keller et al. (2020) [68]; Xia et al. (2019) [164]	Hopp et al. (2020) [58]; Vosoughi et al. (2018) [156]	Kim et al. (2019) [71]; Masullo & Kim (2020) [90]	Bechmann (2020) [21]	Duffy et al. (2019) [38]; Torres et al. (2018) [150]	

P6: Fake news polarization and aversion share a symbiotic cyclical relationship that results in the fragmentation of society.

FN resistors identify deceit and disinformation in FN. The focus of much of the literature on FN mitigation is the facilitation of this identification and the subsequent transition of FN consumers to the resistor role [42, 157]. While the term "resistor" implies action in opposition to the FN, which could involve active campaigning against the FN narrative [58, 87] or rebuking those that share false information [8, 37], some resistors mitigate the FN influence by refusing to incorporate it into their belief system, thus derailing its propagation through the network [149].

P7: Fake news resistors are found along a spectrum, exhibiting a range of passive to proactive resistance behaviors to mitigate fake news.

We note a third relationship, the progression from aversion to motivation. At some point in time, a motivated individual begins their initial journey to produce FN. However, we suggest that it doesn't stop there, but becomes a self-actualizing long-term activity that repeats itself many times or even in perpetuity. As hate grows and tolerance wanes between those of differing viewpoints, affecting society at large, FN producers are incentivized at the individual level to create more news stories to garner clicks, ad revenue, and influence. Societal splits increase agenda setting, increase both confirmation bias and cognitive bias, and provide fertile ground for new FN products and greater spread [9, 12, 124]. Thus, we suggest the following:

P8: Aversion to differing others promotes new motivations for fake news

Future Research Agenda

The complex interactions that enable FN propagation, consequences, and societal impacts clearly position FN as a wicked problem. Fortunately, the IS research community is well-positioned to expand our understanding of FN phenomena and develop appropriate mitigation strategies. Also, while we believe our approach was unique and valuable, we identify some limitations in our study. Limitations may be present due to inclusion and exclusion choices and which keywords to use. We identified and attempted to include disciplines outside of IS that might have an important voice in FN research, but we recognize that not all relevant papers from all disciplines could be included due to sheer volume. We also acknowledge that, despite a rigorous search, some papers of note may have been overlooked. Many, if not all, of these research limitations may be addressed as authors continue to explore FN phenomena in future research as outlined below.

Based on the framework of FN developed herein, we highlight several future research directions. While this multidisciplinary review of the literature is an opportunity for bringing ideas from other disciplines to IS, we also acknowledge that the nature of FN offers an opportunity for home disciplinary research, cross, and interdisciplinary research [144]. Generally, half of the research identified in this literature review does not employ a specified underlying theory. As a result, we propose FN research could benefit from increased and cohesive theoretical guidance. Table 2 highlights potential theoretical perspectives and research questions, and we discuss some of these opportunities next.

Motivation Research on motivation is important, because to reduce FN, we must remove the impetus for its creation. The most common incentives are financial [6] or influential [148]. While this insight is useful, it is likely incomplete, and additional motivations for FN creation at both the

individual and group levels of analysis remain unexplored. IS has a rich tradition of motivation research which examines factors that facilitate the use of various IS platforms, for both good and bad. What, for instance, might the IS social media research on motivations for information sharing behaviors bring to the discussion of FN research?

Fabrication While FN content is well researched, how the content is developed is relatively understudied across all fields. FN is largely studied in the context of social media and each FN item may be viewed as an instantiation of a digital artifact. To date, IS examinations of FN artifacts have largely considered their composition of that artifact only in terms of their contribution to algorithmic detection. However, IS researchers skilled in text analysis research might profitably apply these skills to FN fabrication investigations. Such research could explore, for instance, strategic design choices in FN messages and their impact on believability, the likelihood of verification, and intention to share.

Propagation The modest volume of FN propagation research represents an opportunity for IS scholars with expertise in social media research to examine information sharing and apply network analysis. The extant IS FN research primarily relies on Twitter for understanding FN phenomena [162], and research on other platforms may be fruitful. Mapping patterns of FN diffusion both within and among social networking sites may yield insights which enable the development of more robust FN control technologies.

Persuasion The persuasiveness of FN messaging is vital to the success of FN campaigns and FN employs tactics related to message content to increase believability [142]. Without such persuasiveness, the ability of FN to propagate may be impaired [85, 132]. We suggest that much remains to be learned about the persuasiveness of FN, as well as how individuals incorporate such knowledge into their belief system. IS has a rich tradition of research in relevant topics, such as deception in online product reviews and phishing emails. The insights, models, and underlying theoretical perspectives from such research is likely applicable to FN. Similarly, trust is intimately linked to epistemic judgements [149] and is a core concept in IS research [135]. Trust research related to e-commerce and online auctions might add useful insights to our understanding of veracity judgements made by FN recipients.

Amplification is a cycle that develops between persuasion and propagation. While much of the mitigation research focuses on disruption of this cycle, there may be additional amplification phenomena relevant to IS research. For instance, while research that uses ML often models engagement as distinct like and share features (corresponding to the endorser and propagator roles in our typology), propagation research often fails to distinguish between the two. While this may stem from the characteristics of the datasets available for such studies (see the discussion of the BuzzSumo dataset [7], diving deeply into the behavioral differences, attitudes and motivations of FN consumers would likely yield insights toward the development of appropriate social media interventions.

Mitigation research is common in IS, much of which focuses on automatic detection [59, 133] or FN notifications [70, 95]. Such research is generally focused on helping FN consumers adopt the resistor role, thereby disrupting the cycle of amplification. While this IS research shows promise, we propose that mitigation tactics could target any theme in our framework. For instance, consider the motivation theme. In addition to reactive strategies designed to interact with persuasion and propagation such as identification, flagging, and technological countermeasures, IS might explore strategies that could discourage FN from being created in the first place (i.e., motivations). How could the click maximization revenue paradigm of modern social media be changed? Alternatively, IS

might look at who pays for the clicks on FN sites - advertisers - and how technology might improve accountability for their role in the monetary success of FN sites. Political motivations for creating FN are harder to address, yet scholars could research and build theories on how to make FN a less attractive political tool. Recent work on measuring internet influence such as that explored by Nimmo [102–104] may yield new strategies for mitigating politically motivated FN.

Conviction represents the tipping point at which point a given FN narrative is incorporated as a deeply held belief. In this conceptualization, conviction can be viewed as the aggregate effect of the persuasiveness of multiple individual FN messages. Literature in other fields have linked the notion of conviction and trust [24, 65]. As noted previously, there is a large body of extant work regarding trust in IS scholarship that may offer useful theoretical perspectives on the formation of conviction.

Polarization occurs when groups divide into opposing (and often acrimonious) camps [62]. In such circumstances, group members become insular and the lines between opinion and fact become blurred as group members reinforce each other [67]. We note that over time, consistent FN messages move consumers towards extremism and polarization, especially as similar FN themes are replayed through different FN channels [81, 101]. While IS research rarely evaluates political ideology [91], perhaps its inclusion could shed additional light on the role of technology in FN-related polarization. Another natural application of IS research to the investigation of polarization is echo chamber research, much of which involves the mining of social media text. Text mining approaches such as sentiment analysis are likely to shed light on polarization due to their ability to quantify the extremity of written language.

Aversion, which describes a state in which people not only disagree with those with alternative views, but actively avoid, ostracize, or attack them, is an often-overlooked consequence of FN. In IS, aversion might be enacted by FN consumers using privacy controls, altering the composition of their network, or abandoning digital services or platforms. While each of these behaviors would be of interest to IS scholars, relevant theoretical perspectives in IS on adoption, use, and discontinuance might shed light on aversion behaviors. Another issue well suited to examination in IS is related to technology use and affect. While some have considered the efficacy of corrections issued by other social media users [89] and the strategies employed in such communications [60], there is much to be learned about interactions between individuals who disagree about the veracity of social media posts.

Fragmentation Increased animosity and partisanship provide new impetus for FN as consumers provide ad revenues and are influenced through widespread propagation [80, 99]. As such, the interaction between polarization and aversion creates new opportunities for FN agendas, serving as motivation to start the cycle all over again. Fragmentation research in IS might examine the role of FN as an antecedent to violent social conflict. FN has become a weaponized form of social media [86, 93, 113]: it incites and magnifies connective action, the online connectedness that has expanded social activism mobilization beyond traditional political organizing and resources [22]. FN, which manifests itself in false virtual artifacts, appears to be particularly effective at provoking violent physical actions in the real world, as illustrated by the "stop the steal" Washington DC insurrection of January 2021 [13]. An additional area of possible interest is the long-term impact of FN on galleries, libraries, archives, and museums (GLAM) [117]. When FN is institutionalized, it can remain in history for generations. We posit that IS researchers can build on knowledge management as well as crowdsourcing to better comprehend the factors that impact, or are impacted by, FN.

Table 2. Future Research Summary

Themes/ Roles	Potential Theoretical Perspectives	Potential Research Questions
Motivation	• Self-Determination Theory and other theoretical perspectives on motivation • Economic theories on incentivization	• How can information sharing behavior research inform FN? • How do online trolls contribute to the FN problem? • How might the financial motivations of black hat hackers inform our understanding of FN fabricators? • Are there relevant intrinsic motivations for the creation of FN on social media?
Fabrication	• Semiotics • Impression Management • Media Synchronicity	• What is the impact of design on believability, the likelihood of verification, and intention to share? • What content makes FN believable and how can consumers use this to detect FN? • Does political FN content employ different strategic messaging than apolitical FN? • How do creators use deep fakes in FN? • How do digital FN creators impact the spread of FN?
Propagation	• Social contagion theory • Diffusion theory • Game theory	• What propagation patterns exist in FN? • To what extent do FN propagators knowingly propagate? • What do propagators gain from propagating FN? • Might the implementation of a simple retraction feature in social media interfaces help mitigate the aggregate flow of false information? • What is the efficacy of news rating and flagging solutions, given user experience differences across platforms? • How does the ideological composition of the network alter FN spread?
Persuasion	• Elaboration likelihood • Epistemological theories • Theories of trust	• How can trust research inform FN research? • Which deceptive FN practices are most commonly employed in online FN? • Which of these practices engender the most trust in FN consumers? • How does this influence further intentions to share FN items? • How do social media platform differences influence the persuasive effect of FN? • How do differences in computer self-efficacy and technological innovativeness influence FN susceptibility?
Amplification	• Social contagion theory • Diffusion theory • Game theory • Elaboration likelihood • Epistemological theories • Theories of trust	• How do behavioral differences, attitudes, and motivations of FN consumers impact FN consumption? • How does affective state influence FN engagement? • Are there common temporal delays between engagement actions which may be exploited for interventions? • What are the relationships between engagement levels, engagement types, technology efficacy, FN virality, and/or peer relationships?
Mitigation	• Deterrence theory • Protection motivation theory • Self-efficacy	• How can FN be a less attractive political tool. • What preemptive methods for mitigating FN exist? • Which of these methods is most efficacious? • How do non-mitigating (those other than flagging, rating, etc.) design elements on social media websites interact with user engagement? • How might the concepts of threat appraisal and coping appraisal from protection motivation theory be applied to FN phenomena? • What is the impact of technology mitigation beyond the focal FN consumer?

Table 2. (Continued).

Conviction	• Theories of trust • Cognitive dissonance theory • Social influence theory	• How can trust research inform FN research? • How does disposition to trust influence the conviction potential of FN consumers? • What role do flags and ratings have on FN consumers over long periods of time? • How do individuals reconcile differing levels of trust among the entities involved in FN-related discourse? • How do IT artifacts or platforms differentially influence conviction?
Polarization	• Homophily • Theories on party affiliation	• What do text mining approaches tell us about FN polarization? • How might FN engagement reflect identity management on the part of ideological groups? • How does engagement with FN vary among polarized social media members for apolitical content? • What role does polarization play in the composition and structure of social networks? • What impact does polarization have on the long-term trust of creator or endorser?
Aversion	• Cognitive dissonance • Theories of IS continuance • Generalized aggression model	• How might FN initiated and ideologically fueled interactions be influenced by the affective states of the individuals involved? • How is digitally mediated aversion enacted and what moderates it? • How does FN lead to IS continuance or discontinuance?
Fragmentation	• Homophily • Theories on party affiliation • Cognitive dissonance • Theories of IS continuance • Generalized aggression model	• How can knowledge management and crowdsourcing research inform FN research? • What makes virtual FN as inflammatory, or more so, than real world events? • How does fabricated information with no physical proof lead people to violent social action? • How might digital activism be used to reconcile differences among divided social media groups? • FN What is the impact of FN on knowledge management?
Roles	• Theory of Planned Behavior • Impression Management • Theory of Reasoned Action	• How do different personality types respond to and participate in FN? • How does FN participation impact a participant's social status? • What motivates individuals to continue to propagate FN? • What repercussions do individuals face for participating in FN? • How can the effect of endorsers and influencers be dampened?

Roles FN roles provide a clear opportunity for IS researchers. Do endorsers of one FN item resist others? If so, why? When do people take on multiple roles? When studied, engagement is often modeled as the dependent variable and is all-encompassing of the constituent behaviors and associated roles: sharing (propagators), liking (endorsers), or commenting (endorsers and resistors). Behavioral insights about how users adopt roles during FN discourse may improve our ability to design systems that encourage adoption of the resistor role. Additionally, extant research on FN ignores the agency of technology artifacts despite the regular reference to bots and AI algorithms which often operate autonomously once deployed. Example research questions to advance IS study in this area might include: What factors guide the behavior of FN recipients and dictate roles? What is the differential impact of roles on the propagation of FN?

What individual differences in FN consumers help resist FN spread? How do digital agents interact with humans in social media driven FN discourse? For example, IS research historically applies many different research methods. From our review, we find that quantitative and design science methods were used more frequently in the IS literature than the other fields examined in this study (See Appendix Table A5). We propose that IS can benefit from applying more qualitative or mixed method approaches to help answer how and why questions.

While the identification of these roles and their relationships to major themes within the FN literature provides insights into FN phenomena, there are two theoretically important observations to be made about such roles. First, multiple roles may be adopted by the same actor. For example, a single actor may be a propagator by sharing a post, and an endorser by "liking" the post. Alternatively, an individual might propagate one FN item, while resisting another. Thus, roles may be studied at a micro-level (FN event-specific) or a macro level (specific FN topics or particular groups/networks). Our analysis, while demonstrating the potential of the co-mingling of roles, reveals that it is important to be able to distinguish between actors and the roles they adopt in interactions with FN. As previously noted, studies in the extant FN literature may fail to clearly identify the role or roles addressed in each inquiry. We argue that this lack of clarity hinders the identification and application of relevant theory and ignores practical distinctions such as the fact that many detection algorithms treat likes and shares differently [132]. The exception to this would be design science research investigating the propagation of FN [32, 164, 165], which often distinguishes between engagements with FN as described in this typology, demonstrating the utility of distinguishing between these roles.

Another observation, which may be of particular interest to IS, is how technology is conceptualized in relation to roles. Our review suggests that, to date, technology has primarily been presented in conceptualizations consistent with the computational or tool views of technology [108]. Such research often highlights either the technological affordances of social media and their contributions to the spread of FN [24, 147] or considers the algorithmic potential of technology to identify FN and potentially disrupt its diffusion through social networks [73, 164]. However, such views often fail to fully recognize the possibility that technology may actively assume one or more of the roles described above. For instance, viewing the Facebook platform as an actor in the FN process may expose its role as both a propagator, whose algorithms reward virality and as a resistor, that actively employs automated fact-checking. Similarly, bots might be viewed as having agency and the ability to assume one or more of these roles, essentially independent of human actors once deployed. We argue that acknowledging the digital agency [3] of technological artifacts involved in FN will continue to gain importance as advances in AI expand the capacity of machines to act independently.

This investigation of FN has afforded a synthesized view of how these all relate to each other. We propose three levels with which to approach FN. First, there is the individual FN story, which is subsumed by the larger network level. The network is similarly a subset of the greater societal level. At the individual news story level, the roles include creators, consumers, and resistors. We observe individual news stories in the themes of motivation, fabrication, propagation, and mitigation. We also observe individual news stories in the progression from aversion to motivation. At the network level, the roles include influencers, endorsers, and propagators with themes around persuasion and conviction. The cycle of amplification comes into play here. Last, at the societal level, we find both creators and resistors, working within polarization and aversion, and trying either to promote or mitigate the cycle of fragmentation.

Conclusion

Unfortunately, fake news is unlikely to be eradicated anytime soon and we anticipate that FN research will continue to grow. This review contributes to the field in several ways. The descriptive model of FN provides a framework of FN research. We outline a typology of FN roles, and our review and tables provide resources for future researchers. We offer a research agenda that provides guidance and our details on developing a Grounded Theory literature review adds to literature review methodologies. Through these contributions, we provide a unifying FN framework and common language for researchers working across disciplinary silos. Although the future of fake news appears grim, we believe that with further understanding fake news can be better understood and the outlook for reducing its impact will improve.

Acknowledgments

Disclosure statement

Notes on contributors

Jordana George is a Clinical Assistant Professor of Information Systems in the Mays Business School at Texas A&M University. She earned her Ph.D. in Information Systems at Baylor University. Dr. George researches the societal impact of information systems, including social inclusion, emancipatory technologies, and digital activism. She has published in *Information and Organization, Information Systems Management, Communications of the AIS*, and *AIS Transactions on Replication Research*. She serves as the Managing Editor for Workshops at the *Journal of the AIS*.

Natalie Gerhart is an Assistant Professor of Business Intelligence and Analytics at Creighton University. She received her Ph.D. from the University of North Texas. Her research interests include decision stopping rules, human computer interaction, business intelligence and analytics, and social networking. Dr. Gerhart has published in such journals as *MIS Quarterly Executive, Decision Support Systems, International Journal of Human-Computer Interaction*, and *DATA BASE for Advances in Information Systems*.

Russell Torres is an Assistant Professor of Business Analytics in the Department of Information Technology and Decision Sciences at the University of North Texas and a Society for Information Management (SIM) Research Fellow. He received his Ph.D. in Business Computer Information Systems from the University of North Texas following a career in information technology consulting. Dr. Torres's research interests include data-driven decision-making, organizational impacts of business intelligence and analytics, the use and governance of artificial intelligence, and a wide variety of information technology management topics. He is a co-author of *A Survey of Core Research in Information Systems* and his research appears in journals including *European Journal of Information Systems, Information & Management, International Journal of Information Management*, and *MIS Quarterly Executive*

References

1. 116TH Congress Senate. Report of The Select Committee on Intelligence United States Senate on Russian Active Measures Campaigns and Interference in the 2016 U.S. Election. 116TH Congress Senate, Washington, DC, 2020.

2. Adler, E. and Drieschova, A. The Epistemological Challenge of Truth-Subversion to the Liberal International Order. International Organization, Published Online (2020), 1–27.
3. Ågerfalk, P.J. Artificial intelligence as digital agency. European Journal of Information Systems, 29, 1 (January 2020), 1–8.
4. Ajzen, I. and Fishbein, M. Attitudinal and normative variables as predictors of specific behavior. Journal of Personality and Social Psychology, 27, 1 (July 1973), 41–57.
5. Albright, J. Welcome to the Era of Fake News. Media and Communication, 5, 2 (June 2017), 87.
6. Allcott, H. and Gentzkow, M. Social Media and Fake News in the 2016 Election. Journal of Economic Perspectives, 31, 2 (May 2017), 211–236.
7. Allcott, H., Gentzkow, M., and Yu, C. Trends in the diffusion of misinformation on social media. Research & Politics, Published Online (April 2019), 1–8.
8. Altay, S., Hacquin, A.-S., and Mercier, H. Why do so few people share fake news? It hurts their reputation. New Media & Society, Published Online (November 2020), 1–22.
9. Arceneaux, K. Cognitive Biases and the Strength of Political Arguments. American Journal of Political Science, 56, 2 (2012), 271–285.
10. Arceneaux, K., Johnson, M., and Murphy, C. Polarized Political Communication, Oppositional Media Hostility, and Selective Exposure. The Journal of Politics, 74, 1 (January 2012), 174–186.
11. Asadullah, A., Kankanhalli, A., and Faik, I. Understanding Users' Intention to Verify Content on Social Media Platforms. In Proceedings of the Pacific Asia Conference on Information Systems. Association for Information Systems, Yokohama, 2018, pp. 1–8.
12. Bakir, V. and McStay, A. Fake News and The Economy of Emotions. Digital Journalism, 6, 2 (February 2018), 154–175.
13. Barry, D. and Frenkel, S. "Be There. Will Be Wild!": Trump All but Circled the Date. The New York Times, 2021. https://www.nytimes.com/2021/01/06/us/politics/capitol-mob-trump-supporters.html .
14. Bauer, P.C. and Hohenberg, B.C. von. Believing and Sharing Information by Fake Sources: An Experiment. Political Communication, Published Online (November 2020), 1–25.
15. Baum, M.A. Sex, Lies, and War: How Soft News Brings Foreign Policy to the Inattentive Public. American Political Science Review, 96, 1 (March 2002), 91–109.
16. Baum, M.A. and Groeling, T. Reality Asserts Itself: Public Opinion on Iraq and the Elasticity of Reality. International Organization, 64, 3 (July 2010), 443–479.
17. Baum, M.A. and Gussin, P. In the Eye of the Beholder: How Information Shortcuts Shape Individual Perceptions of Bias in the Media. Quarterly Journal of Political Science, 3, 1 (March 2008), 1–31.
18. Baum, M.A. and Jamison, A.S. The Oprah Effect: How Soft News Helps Inattentive Citizens Vote Consistently. The Journal of Politics, 68, 4 (November 2006), 946–959.
19. Baum, M.A. and Potter, P.B.K. Media, Public Opinion, and Foreign Policy in the Age of Social Media. The Journal of Politics, 81, 2 (April 2019), 747–756.
20. Baumgartner, J. and Morris, J.S. The Daily Show Effect: Candidate Evaluations, Efficacy, and American Youth. American Politics Research, 34, 3 (May 2006), 341–367.
21. Bechmann, A. Tackling Disinformation and Infodemics Demands Media Policy Changes. Digital Journalism, 8, 6 (July 2020), 855–863.
22. Bennett, W.L. and Segerberg, A. The Logic of Connective Action - Digital media and the personalization of contentious politics. Information, Communication & Society, 15, 5 (2012), 739–768.
23. Bernard, J.-G., Dennis, A., Galletta, D., Khan, A., and Webster, J. The Tangled Web: Studying Online Fake News. In Proceedings of the International Conference on Information Systems. Association for Information Systems, Munich, 2019, pp. 1–7.
24. Bøggild, T., Aarøe, L., and Petersen, M.B. Citizens as Complicits: Distrust in Politicians and Biased Social Dissemination of Political Information. American Political Science Review, Published Online (2020), 1–16.
25. Bowers, A.W. and Creamer, E.G. Core principles of grounded theory in a systematic review of environmental education for secondary students. International Journal of Social Research Methodology, Published Online (September 2020), 1–14.

26. Braun, J.A. and Eklund, J.L. Fake News, Real Money: Ad Tech Platforms, Profit-Driven Hoaxes, and the Business of Journalism. Digital Journalism, 7, 1 (January 2019), 1–21.

27. Carlson, M. Fake news as an informational moral panic: the symbolic deviancy of social media during the 2016 US presidential election. Information, Communication & Society, Published Online (August 2018), 1–15.

28. Clemons, E.K., Dewan, R.M., Kauffman, R.J., and Weber, T.A. Understanding the Information-Based Transformation of Strategy and Society. Journal of Management Information Systems, 34, 2 (April 2017), 425–456.

29. Coe, K., Tewksbury, D., Bond, B.J., et al. Hostile News: Partisan Use and Perceptions of Cable News Programming. Journal of Communication, 58, 2 (June 2008), 201–219.

30. Crabtree, C., Golder, M., Gschwend, T., and Indriđason, I.H. It Is Not Only What You Say, It Is Also How You Say It: The Strategic Use of Campaign Sentiment. The Journal of Politics, 82, 3 (2020), 1044–1060.

31. Daly, N. Fake animal news abounds on social media as coronavirus upends life. National Geographic, 2020. https://www.nationalgeographic.com/animals/2020/03/coronavirus-pandemic-fake-animal-viral-social-media-posts/ .

32. Dang, A., Moh'd, A., Islam, A., and Milios, E. Early Detection of Rumor Veracity in Social Media. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2019, pp. 2355–2364.

33. Das, A. and Schroeder, R. Online disinformation in the run-up to the Indian 2019 election. Information, Communication & Society, Published Online (March 2020), 1–17.

34. Dennis, A.R., Fuller, R.M., and Valacich, J.S. Media, Tasks, and Communication Processes: A Theory of Media Synchronicity. MIS Quarterly, 32, 3 (September 2008), 575–600.

35. Downing, J. and Dron, R. Tweeting Grenfell: Discourse and networks in critical constructions of British Muslim social boundaries on social media. New Media & Society, Published Online (July 2019), 1–21.

36. Doyle, A. Analyzing the Laws of MIL: a Five-step Scientific Conversation on Critical Information Literacy. Communications in Information Literacy, 13, 1 (2019), 114–126.

37. Duffy, A. and Si, J.T.R. Naming the Dog on the Internet. Digital Journalism, 6, 7 (August 2018), 910–927.

38. Duffy, A., Tandoc, E., and Ling, R. Too good to be true, too good not to share: the social utility of fake news. Information, Communication & Society, Published Online (June 2019), 1–15.

39. Elmwood, V. The Journalistic Approach: Evaluating Web Sources in an Age of Mass Disinformation. Communications in Information Literacy, 14, 2 (December 2020), 269–286.

40. Evanson, C. and Sponsel, J. From Syndication to Misinformation: How Undergraduate Students Engage with and Evaluate Digital News. Communications in Information Literacy, 13, 2 (December 2019), 228–250.

41. Farkas, J., Schou, J., and Neumayer, C. Cloaked Facebook pages: Exploring fake Islamist propaganda in social media. New Media & Society, 20, 5 (May 2018), 1850–1867.

42. FEMA. Coronavirus Rumor Control. FEMA, 2020. https://www.fema.gov/coronavirus/rumor-control .

43. Figl, K., Kießling, S., Rank, C., and Vakulenko, S. Fake News Flags, Cognitive Dissonance, and the Believability of Social Media Posts. In Proceedings of the International Conference on Information Systems. Association for Information Systems, Munich, 2019, pp. 1–9.

44. Forestal, J. Beyond Gatekeeping: Propaganda, Democracy, and the Organization of Digital Publics. The Journal of Politics, Published Online (April 2020), 1–14.

45. Fox, R.L., Van Sickel, R.W., and Steiger, T.L. Tabloid justice: criminal justice in an age of media frenzy. Lynne Rienner Publishers, Boulder, 2007.

46. García Lozano, M., Brynielsson, J., Franke, U., et al. Veracity assessment of online data. Decision Support Systems, Published Online (February 2020), 1–14.

47. Garrett, R.K., Sude, D., and Riva, P. Toeing the Party Lie: Ostracism Promotes Endorsement of Partisan Election Falsehoods. Political Communication, 37, 2 (March 2020), 157–172.

48. George, J.J. and Leidner, D.E. From clicktivism to hacktivism: Understanding digital activism. Information and Organization, Published Online (May 2019), 1–45.
49. Ghosh, S. and Shah, C. Toward Automatic Fake News Classification. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2019, pp. 2254–2263.
50. Gimpel, H., Heger, S., Kasper, J., and Schafer, R. The Power of Related Articles – Improving Fake News Detection on Social Media Platforms. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2020, pp. 6063–6072.
51. Gimpel, H., Heger, S., Olenberger, C., and Utz, L. The Effectiveness of Social Norms in Fighting Fake News on Social Media. Journal of Management Information Systems, 38, 1 (January 2021), 196–221.
52. Gläßel, C. and Paula, K. Sometimes Less Is More: Censorship, News Falsification, and Disapproval in 1989 East Germany. American Journal of Political Science, Published Online (2019), 1–17.
53. Godler, Y. Post-Post-Truth: An Adaptationist Theory of Journalistic Verism. Communication Theory, Published Online (2019), 1–19.
54. Guess, A., Nagler, J., and Tucker, J. Less than you think: Prevalence and predictors of fake news dissemination on Facebook. Science Advances, 5, 1 (January 2019), 1–8.
55. Guinea, A.O. de and Paré, G. What literature review type should I conduct? Routledge Handbooks Online, 2017.
56. Helberger, N. The Political Power of Platforms: How Current Attempts to Regulate Misinformation Amplify Opinion Power. Digital Journalism, 8, 6 (July 2020), 842–854.
57. Hjorth, F. and Adler-Nissen, R. Ideological Asymmetry in the Reach of Pro-Russian Digital Disinformation to United States Audiences. Journal of Communication, 69, 2 (April 2019), 168–192.
58. Hopp, T., Ferrucci, P., and Vargo, C.J. Why Do People Share Ideologically Extreme, False, and Misleading Content on Social Media? A Self-Report and Trace Data–Based Analysis of Countermedia Content Dissemination on Facebook and Twitter. Human Communication Research, 46, 4 (October 2020), 357–384.
59. Hosni, A.I.E. and Li, K. Minimizing the influence of rumors during breaking news events in online social networks. Knowledge-Based Systems, Published Online (December 2019), 1–12.
60. Huang, Y. and Wang, W. When a story contradicts: correcting health misinformation on social media through different message formats and mechanisms. Information, Communication & Society, Published Online (November 2020), 1–18.
61. Humprecht, E. Where "fake news" flourishes: a comparison across four Western democracies. Information, Communication & Society, 22, 13 (November 2019), 1973–1988.
62. Iyengar, S. and Westwood, S.J. Fear and Loathing across Party Lines: New Evidence on Group Polarization. American Journal of Political Science, 59, 3 (2015), 690–707.
63. Janze, C. and Risius, M. Automatic Detection of Fake News on Social Media Platforms. In Proceedings of the Pacific Asia Conference on Information Systems. Association for Information Systems, Langkawi, 2017, pp. 1–15.
64. Jiang, J., Goonawardene, N., and Tan, S.S.-L. Do You Find Health Advice on Microblogging Platforms Credible? Role of Self-Efficacy and Health Threat in Credibility Assessment. In Proceedings of the Pacific Asia Conference on Information Systems. Association for Information Systems, Chengdu, 2014, pp. 1–10.
65. Jones-Jang, S.M., Kim, D.H., and Kenski, K. Perceptions of mis- or disinformation exposure predict political cynicism: Evidence from a two-wave survey during the 2018 US midterm elections. New Media & Society, Published Online (July 2020), 1–21.
66. Kapantai, E., Christopoulou, A., Berberidis, C., and Peristeras, V. A systematic literature review on disinformation: Toward a unified taxonomical framework. New Media & Society, Published Online (September 2020), 1–26.
67. Kavanagh, J. and Rich, M.D. Truth decay: an initial exploration of the diminishing role of facts and analysis in American public life. RAND, Santa Monica, California, 2018.

68. Keller, F.B., Schoch, D., Stier, S., and Yang, J. Political Astroturfing on Twitter: How to Coordinate a Disinformation Campaign. Political Communication, 37, 2 (March 2020), 256–280.

69. Kim, A. and Dennis, A.R. Says Who?: How News Presentation Format Influences Perceived Believability and the Engagement Level of Social Media Users. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Waikoloa Village, 2018, pp. 3955–3965.

70. Kim, A. and Dennis, A.R. Says Who? The Effects of Presentation Format and Source Rating on Fake News in Social Media. MIS Quarterly, 43, 3 (September 2019), 1025–1039.

71. Kim, A., Moravec, P.L., and Dennis, A.R. Combating Fake News on Social Media with Source Ratings: The Effects of User and Expert Reputation Ratings. Journal of Management Information Systems, 36, 3 (July 2019), 931–968.

72. Kim, J.W. Rumor has it: The effects of virality metrics on rumor believability and transmission on Twitter. New Media & Society, 20, 12 (December 2018), 4807–4825.

73. Kormelink, T.G. and Meijer, I.C. Truthful or Engaging? Digital Journalism, 3, 2 (March 2015), 158–174.

74. Krafft, P.M. and Donovan, J. Disinformation by Design: The Use of Evidence Collages and Platform Filtering in a Media Manipulation Campaign. Political Communication, 37, 2 (March 2020), 194–214.

75. Kumar, N., Venugopal, D., Qiu, L., and Kumar, S. Detecting Anomalous Online Reviewers: An Unsupervised Approach Using Mixture Models. Journal of Management Information Systems, 36, 4 (October 2019), 1313–1346.

76. Landrum, A.R., Olshansky, A., and Richards, O. Differential susceptibility to misleading flat earth arguments on youtube. Media Psychology, Published Online (September 2019), 1–30.

77. Larsen, K.R., Hovorka, D.S., Dennis, A.R., and West, J.D. Understanding the Elephant: The Discourse Approach to Boundary Identification and Corpus Construction for Theory Review Articles. Journal of the Association for Information Systems, 20, 7 (2019), 887–927.

78. Lazer, D.M.J., Baum, M.A., Benkler, Y., et al. The science of fake news. Science, 359, 6380 (March 2018), 1094–1096.

79. Leidner, D. Review and Theory Symbiosis: An Introspective Retrospective. Journal of the Association for Information Systems, 19, 06 (June 2018), 552–567.

80. Lelkes, Y., Sood, G., and Iyengar, S. The Hostile Audience: The Effect of Access to Broadband Internet on Partisan Affect. American Journal of Political Science, 61, 1 (2017), 5–20.

81. Levendusky, M.S. Why Do Partisan Media Polarize Viewers? American Journal of Political Science, 57, 3 (2013), 611–623.

82. Ling, R. Confirmation Bias in the Era of Mobile News Consumption: The Social and Psychological Dimensions. Digital Journalism, 8, 5 (May 2020), 596–604.

83. Linvill, D.L. and Warren, P.L. Troll Factories: Manufacturing Specialized Disinformation on Twitter. Political Communication, Published Online (February 2020), 1–21.

84. Lu, Y. and Pan, J. Capturing Clicks: How the Chinese Government Uses Clickbait to Compete for Visibility. Political Communication, Published Online (July 2020), 1–32.

85. Lukito, J. Coordinating a Multi-Platform Disinformation Campaign: Internet Research Agency Activity on Three U.S. Social Media Platforms, 2015 to 2017. Political Communication, 37, 2 (March 2020), 238–255.

86. Maasberg, M., Ayaburi, E., Liu, C.Z., and Au, Y.A. Exploring the Propagation of Fake Cyber News: An Experimental Approach. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Waikoloa Village, 2018, pp. 3717–3726.

87. MacFarquhar, N., Feuer, A., and Goldman, A. Federal Arrests Show No Sign That Antifa Plotted Protests. The New York Times, 2020. https://www.nytimes.com/2020/06/11/us/antifa-protests-george-floyd.html .

88. Mackey, T. Embedding Metaliteracy in the Design of a Post-Truth MOOC: Building Communities of Trust. Communications in Information Literacy, 14, 2 (December 2020), 346–361.

89. Margolin, D.B., Hannak, A., and Weber, I. Political Fact-Checking on Twitter: When Do Corrections Have an Effect? Political Communication, 35, 2 (April 2018), 196–219.

90. Masullo, G.M. and Kim, J. Exploring "Angry" and "Like" Reactions on Uncivil Facebook Comments That Correct Misinformation in the News. Digital Journalism, Published Online (October 2020), 1–20.

91. Mentzer, K., Fallon, K., Prichard, J., and Yates, D.J. Measuring and Unpacking Affective Polarization on Twitter: The Role of Party and Gender in the 2018 Senate Races. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2020, pp. 2459–2468.

92. Miller, J.M., Saunders, K.L., and Farhart, C.E. Conspiracy Endorsement as Motivated Reasoning: The Moderating Roles of Political Knowledge and Trust. American Journal of Political Science, 60, 4 (2016), 824–844.

93. Molina, M.D., Sundar, S.S., Le, T., and Lee, D. "Fake News" Is Not Simply False Information: A Concept Explication and Taxonomy of Online Content. American Behavioral Scientist, Published Online (October 2019), 1–33.

94. Moravec, P., Kim, A., and Dennis, A. Flagging Fake News: System 1 vs. System 2. In Proceedings of the International Conference on Information Systems. Association for Information Systems, San Francisco, 2018, pp. 1–17.

95. Moravec, P., Minas, R., and Dennis, A.R. Fake News on Social Media: People Believe What They Want to Believe When it Makes No Sense at All. MIS Quarterly, 43, 4 (2019), 1343–1360.

96. Moravec, P.L., Kim, A., and Dennis, A.R. Appealing to Sense and Sensibility: System 1 and System 2 Interventions for Fake News on Social Media. Information Systems Research, 31, 3 (August 2020), 987–1006.

97. Moravec, P.L., Kim, A., Dennis, A.R., and Minas, R.K. Do You Really Know If It's True? How Asking Users to Rate Stories Affects Belief in Fake News on Social Media. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2019, pp. 6602–6611.

98. Mousavizadeh, M., Hazarika, B., and Rea, A. A Study of News Credibility and Trust on Social Media – A Multi-Cultural Evaluation. In Proceedings of the Americas Conference on Information Systems. Association for Information Systems, New Orleans, 2018, pp. 1–5.

99. Munger, K. All the News That's Fit to Click: The Economics of Clickbait Media. Political Communication, Published Online (December 2019), 1–22.

100. Nelson, J.L. and Taneja, H. The small, disloyal fake news audience: The role of audience availability in fake news consumption. New Media & Society, 20, 10 (October 2018), 3720–3737.

101. Nie, N.H., Miller, D.W., Golde, S., Butler, D.M., and Winneg, K. The World Wide Web and the U.S. Political News Market. American Journal of Political Science, 54, 2 (2010), 428–439.

102. Nimmo, B. Robot Wars: How Bots Joined Battle in the Gulf. Journal of International Affairs, 71, 1.5 (2018), 87–96.

103. Nimmo, B. Measuring Traffic Manipulation on Twitter. University of Oxford Internet Institute, 2019.

104. Nimmo, B. The breakout scale: Measuring the impact of influence operations. Brookings Institute, 2020.

105. Nunberg, G. "Disinformation" Is The Word Of The Year — And A Sign Of What's To Come. Fresh Air, 2019. https://www.npr.org/2019/12/30/790144099/disinformation-is-the-word-of-the-year-and-a-sign-of-what-s-to-come .

106. Oliver, J.E. and Wood, T.J. Conspiracy Theories and the Paranoid Style(s) of Mass Opinion. American Journal of Political Science, 58, 4 (2014), 952–966.

107. Olivieri, A.C., Valais-Wallis, H.-S., and Cudre-Mauroux, P. Creating Task-Generic Features for Fake News Detection. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2019, pp. 5196–5205.

108. Orlikowski, W.J. and Lacono, C.S. Research Commentary: Desperately Seeking the "IT" in IT Research–A Call to Theorizing the IT Artifact. Information Systems Research, 12, 2 (June 2001), 121–134.

109. Otto, L., Glogger, I., and Boukes, M. The Softening of Journalistic Political Communication: A Comprehensive Framework Model of Sensationalism, Soft News, Infotainment, and Tabloidization. Communication Theory, 27, 2 (May 2017), 136–155.

110. Pan, Z., Lu, Y., Wang, B., and Chau, P.Y.K. Who Do You Think You Are? Common and Differential Effects of Social Self-Identity on Social Media Usage. Journal of Management Information Systems, 34, 1 (January 2017), 71–101.

111. Papanastasiou, Y. Fake News Propagation and Detection: A Sequential Model. Management Science, 66, 5 (January 2020), 1826–1846.

112. Paré, G., Trudel, M.-C., Jaana, M., and Kitsiou, S. Synthesizing information systems knowledge: A typology of literature reviews. Information & Management, 52, 2 (March 2015), 183–199.

113. Patel, S. and Constantiou, I. Human Agency in the Propagation of False Information - A Conceptual Framework. In Proceedings of the European Conference on Information Systems. Association for Information Systems, Virtual, 2020, pp. 1–11.

114. Pedersen, S. and Burnett, S. "Citizen Curation" in Online Discussions of Donald Trump's Presidency. Digital Journalism, 6, 5 (May 2018), 545–562.

115. Pennycook, G., Cannon, T.D., and Rand, D.G. Prior exposure increases perceived accuracy of fake news. Journal of Experimental Psychology, 147, 12 (December 2018), 1865–1880.

116. Prior, M. News vs. Entertainment: How Increasing Media Choice Widens Gaps in Political Knowledge and Turnout. American Journal of Political Science, 49, 3 (2005), 577–592.

117. Qutab, S., Myers, M.D., and Gardner, L.A. Information Disorder in The Glam Sector: The Challenges of Crowd Sourced Contributions. In Proceedings of the European Conference on Information Systems. Association for Information Systems, Stockholm-Uppsala, 2019, pp. 1–12.

118. Rampal, K.R. and Adams, W.C. Credibility of the Asian News Broadcasts of the Voice of America and the British Broadcasting Corporation: Gazette (Leiden, Netherlands), 46, 2 (1990), 93–111.

119. Ribeiro, M.H., Calais, P.H., Almeida, V.A.F., and Meira Jr, W. "Everything I Disagree With is #FakeNews": Correlating Political Polarization and Spread of Misinformation. In Proceedings Data Science + Journalism. Halifax, Canada, 2017, pp. 1–8.

120. Risius, M., Aydinguel, O., and Haug, M. Towards an Understanding Of Conspiracy Echo Chambers On Facebook. In Proceedings of the European Conference on Information Systems. Association for Information Systems, Stockholm-Uppsala, 2019, pp. 1–11.

121. Robertson, C.T. and Mourão, R.R. Faking Alternative Journalism? An Analysis of Self-Presentations of "Fake News" Sites. Digital Journalism, 8, 8 (September 2020), 1011–1029.

122. Robinson, M.J. Public Affairs Television and the Growth of Political Malaise: The Case of "The Selling of the Pentagon." American Political Science Review, 70, 2 (June 1976), 409–432.

123. Roemmele, A. and Gibson, R. Scientific and subversive: The two faces of the fourth era of political campaigning. New Media & Society, 22, 4 (April 2020), 595–610.

124. Rojecki, A. and Meraz, S. Rumors and factitious informational blends: The role of the web in speculative politics. New Media & Society, 18, 1 (January 2016), 25–43.

125. Rosenzweig, J.W., Thill, M., and Lambert, F. Student Constructions of Authority in the Framework Era: A Bibliometric Pilot Study Using a Faceted Taxonomy. College and Research Libraries, 80, 3 (2019), 401–420.

126. Ross, B., Pilz, L., Cabrera, B., Brachten, F., Neubaum, G., and Stieglitz, S. Are social bots a real threat? An agent-based model of the spiral of silence to analyse the impact of manipulative actors in social networks. European Journal of Information Systems, 28, 4 (July 2019), 394–412.

127. Ryan, T. and Aziz, A. Is the Political Right More Credulous?: Experimental Evidence Against Asymmetric Motivations to Believe False Political Information. The Journal of Politics, Published Online (August 2020), 1–4.

128. Saurwein, F. and Spencer-Smith, C. Combating Disinformation on Social Media: Multilevel Governance and Distributed Accountability in Europe. Digital Journalism, 8, 6 (July 2020), 820–841.
129. Schryen, G., Wagner, G., Benlian, A., and Paré, G. A Knowledge Development Perspective on Literature Reviews: Validation of a New Typology in the IS Field. Communications of the AIS, 46, (2020), 134–186.
130. Schudson, M. The Power of News. Harvard University Press, 1995.
131. Seidel, S., Recker, J., and vom Brocke, J. Sensemaking and Sustainable Practicing: Functional Affordances of Information Systems in Green Transformations. MIS Quarterly, 37, 4 (December 2013), 1275–1299.
132. Seref, M. and Seref, O. Rhetoric Mining for Fake News: Identifying Moves of Persuasion and Disinformation. In Proceedings of the Americas Conference on Information Systems. Association for Information Systems, Cancún, 2019, pp. 1–5.
133. Shang, L., Zhang, D. (Yue), Wang, M., Lai, S., and Wang, D. Towards reliable online clickbait video detection: A content-agnostic approach. Knowledge-Based Systems, Published Online (October 2019), 1–11.
134. Shen, C., Kasra, M., Pan, W., Bassett, G.A., Malloch, Y., and O'Brien, J.F. Fake images: The effects of source, intermediary, and digital media literacy on contextual assessment of image credibility online. New Media & Society, 21, 2 (February 2019), 438–463.
135. Sidorova, A., Evangelopoulos, N., Torres, R., and Johnson, V. A Survey of Core Research in Information Systems. Springer US, New York, NY, US, 2013.
136. Statista. Online sharing of fake news U.S. 2019. 2019.
137. Steensen, S. Journalism's epistemic crisis and its solution: Disinformation, datafication and source criticism. Journalism, 20, 1 (January 2019), 185–189.
138. Suntwal, S., Brown, S.A., and Patton, M.W. How does Information Spread? A Study of True and Fake News. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2020, pp. 5893–5902.
139. Sylvester, A., Tate, M., and Johnstone, D. Beyond synthesis: re-presenting heterogeneous research literature. Behaviour & Information Technology, 32, 12 (December 2013), 1199–1215.
140. Taber, C.S. and Lodge, M. Motivated Skepticism in the Evaluation of Political Beliefs. American Journal of Political Science, 50, 3 (2006), 755–769.
141. Tandoc, E.C. The facts of fake news: A research review. Sociology Compass, 13, 9 (September 2019), 1–9.
142. Tandoc, E.C., Lim, Z.W., and Ling, R. Defining "Fake News." Digital Journalism, 6, 2 (February 2018), 137–153.
143. Tandoc, E.C., Ling, R., Westlund, O., Duffy, A., Goh, D., and Zheng Wei, L. Audiences' acts of authentication in the age of fake news: A conceptual framework. New Media & Society, 20, 8 (August 2018), 2745–2763.
144. Tarafdar, M. and Davison, R.M. Research in Information Systems: Intra-Disciplinary and Inter-Disciplinary Approaches. Journal of the Association for Information Systems, 19, 6 (2018), 523–551.
145. Taylor, A. Before "fake news, " there was Soviet "disinformation." Washington Post, 2016. https://www.washingtonpost.com/news/worldviews/wp/2016/11/26/before-fake-news-there-was-soviet-disinformation/ .
146. Templier, M. and Paré, G. A Framework for Guiding and Evaluating Literature Reviews. Communications of the Association for Information Systems, 37, 1 (August 2015), 112–137.
147. Templier, M. and Paré, G. Transparency in literature reviews: an assessment of reporting practices across review types and genres in top IS journals. European Journal of Information Systems, 27, 5 (September 2018), 503–550.
148. Till, C. Propaganda through "reflexive control" and the mediated construction of reality. New Media & Society, Published Online (January 2020), 1–17.

149. Torres, R., Gerhart, N., and Negahban, A. Combating Fake News: An Investigation of Information Verification Behaviors on Social Networking Sites. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Waikoloa Village, 2018, pp. 3976–3985.

150. Torres, R., Gerhart, N., and Negahban, A. Epistemology in the Era of Fake News: An Exploration of Information Verification Behaviors among Social Networking Site Users. ACM SIGMIS Database: the DATABASE for Advances in Information Systems, 49, 3 (July 2018), 78–97.

151. Urquhart, C. Grounded theory for qualitative research: a practical guide. SAGE, Los Angeles, Calif.; London, 2013.

152. Valenzuela, S., Halpern, D., Katz, J.E., and Miranda, J.P. The Paradox of Participation Versus Misinformation: Social Media, Political Engagement, and the Spread of Misinformation. Digital Journalism, 7, 6 (July 2019), 802–823.

153. Van Bavel, J.J. and Pereira, A. The Partisan Brain: An Identity-Based Model of Political Belief. Trends in Cognitive Sciences, 22, 3 (March 2018), 213–224.

154. Vargo, C.J., Guo, L., and Amazeen, M.A. The agenda-setting power of fake news: A big data analysis of the online media landscape from 2014 to 2016. New Media & Society, 20, 5 (May 2018), 2028–2049.

155. Villafranca, E.S. and Peters, U. Smart and Blissful? Exploring the Characteristics of Individuals That Share Fake News on Social Networking Sites. In Proceedings of the Americas Conference on Information Systems. Association for Information Systems, Cancún, 2019, pp. 1–5.

156. Vosoughi, S., Roy, D., and Aral, S. The spread of true and false news online. Science, 359, 6380 (March 2018), 1146–1151.

157. Vraga, E.K. and Tully, M. Who Is Exposed to News? It Depends on How You Measure: Examining Self-Reported Versus Behavioral News Exposure Measures. Social Science Computer Review, Published Online (November 2018), 1–17.

158. Walker, S., Mercea, D., and Bastos, M. The disinformation landscape and the lockdown of social platforms. Information, Communication & Society, 22, 11 (September 2019), 1531–1543.

159. Walter, N., Cohen, J., Holbert, R.L., and Morag, Y. Fact-Checking: A Meta-Analysis of What Works and for Whom. Political Communication, Published Online (October 2019), 1–26.

160. Wang, S.A., Pang, M.-S., and Pavlou, P.A. Cure or Poison? Impact of Identity Verification on the Creation of Fake Posts on Social Media. In Proceedings of the International Conference on Information Systems. Association for Information Systems, Seoul, 2017, pp. 1–18.

161. Webster, J. and Watson, R.T. Analyzing the Past to Prepare for the Future: Writing a Literature Review. MIS Quarterly, 26, 2 (June 2002), XIII–XXIII.

162. Williamson, W. and Scrofani, J. Trends in Detection and Characterization of Propaganda Bots. In Proceedings of the Hawaii International Conference on System Sciences. IEEE Computer Society, Wailea, 2019, pp. 7118–7123.

163. Wolfswinkel, J.F., Furtmueller, E., and Wilderom, C.P. Using grounded theory as a method for rigorously reviewing literature. European Journal of Information Systems, 22, 1 (2013), 45–55.

164. Xia, Y., Lukito, J., Zhang, Y., Wells, C., Kim, S.J., and Tong, C. Disinformation, performed: self-presentation of a Russian IRA account on Twitter. Information, Communication & Society, 22, 11 (September 2019), 1646–1664.

165. Yan, H.Y., Yang, K.-C., Menczer, F., and Shanahan, J. Asymmetrical perceptions of partisan political bots. New Media & Society, Published Online (2020), 1–22.

166. Zhou, X. and Zafarani, R. A Survey of Fake News: Fundamental Theories, Detection Methods, and Opportunities. ACM Computing Surveys, 53, 5 (October 2020), 109:0–109: 40.